4 Corners Air Quality Task Force
Existing Monitoring Summary
May 2006

Overview of Current Air Quality in the Four Corners Region

In the Four Corners region, the air quality currently meets all National Ambient Air Quality Standards, or NAAQS. See http://www.epa.gov/air/criteria.html. Monitoring for particulate matter (dust and finer particulates), ozone and nitrogen oxides is conducted throughout the region. The monitoring shows that the region is very close to exceeding the health-based standard for ozone. According to data from Mesa Verde National Park, the ozone trend is increasing; ammonium is increasing; there is no trend (as of 2004) in nitrates; and sulfates are decreasing. Mercury advisories have been issued for lakes in all four of the states in the region. Visibility is degraded throughout the region. All four states are currently working on plans to improve visibility. These plans will be submitted to the U.S. Environmental Protection Agency in January 2008. The purpose of the Four Corners Air Quality Task Force is to develop strategies to improve the air quality in the region.

There are multiple jurisdictions in the region. The Four Corners states include New Mexico, Colorado, Utah and Arizona. Tribal lands in the Four Corners region include the Navajo Nation, Ute Mountain Ute, Southern Ute, and Jicarilla Apache. Federal lands in the region are managed by the U.S. Department of Interior, Bureau of Land Management, National Park Service and Bureau of Reclamation, and the U.S. Department of Agriculture, Forest Service.

Pollutant Monitoring

Argonne National Laboratory, through a contract with the U.S. Department of Energy, has developed a map of all meteorological and pollutant monitoring sites in the Four Corners region. That interactive map and additional data are available on their public web site at https://web.ead.anl.gov/fourcorners/index.cfm.

Monitoring in the region has been conducted by state, federal, tribal, local and private entities. Pollutants for which monitoring has been conducted include particulate matter [both fine (PM 2.5) and coarse (PM 10)], ozone, nitrogen oxides, carbon monoxide, sulfur dioxide, and mercury and other pollutant deposition.

The New Mexico Environment Department, Air Quality Bureau, hosts a web site with real-time access to monitoring data. The State of New Mexico monitors sulfur dioxide, ozone and particulate matter in the Four Corners region. Go to: http://air.state.nm.us/

As part of the Early Action Compact for Ozone in San Juan County, New Mexico, passive ozone monitoring was also conducted in the summer of 2003. The results of this monitoring can be found at http://www.nmenv.state.nm.us/aqb/projects/Ozone.html.

Colorado's Department of Publish Health and Environment publishes an air quality data report annually. The report includes trends for pollutants monitored by the state of Colorado. In the region, the state of Colorado monitors particulate matter in Durango and Pagosa Springs. Durango Mountain Resort performs real-time particulate monitoring and submits quarterly reports to the San Juan Basin Environmental Health Department.
Go to: http://apcd.state.co.us/documents/2004AnnualDataReport.pdf

Information on monitoring at the Mesa Verde National Park is also available on line. Go to: http://www2.nature.nps.gov/air/permits/aris/meve/.

Meteorological Monitoring

In addition to pollutant monitoring, agencies also monitor meteorological data, including wind speed and direction, temperature, and solar radiation. Meteorological data can be found on most of the web sites listed above. Meteorological data is used in air quality modeling and can also help us to understand specific monitored data; for example, particulate matter concentration is generally higher during windy days. See the following links for additional meteorological monitoring data:

NOAA National Climatic Data Center (http://www.ncdc.noaa.gov/oa/ncdc.html)
New Mexico Air Quality Monitoring Network (http://air.state.nm.us/)

Visibility Monitoring

Federal land managers, such as the National Park Service and Forest Service, operate monitors at or near Class I areas that measure visibility. This network is called the Interagency Monitoring of Protected Visual Environments, or IMPROVE. Data and photographs from IMPROVE sites is available at http://vista.cira.colostate.edu/IMPROVE/. All Class I areas in the region have degraded visibility due to regional haze. States are currently working on plans required by the federal Regional Haze Rule for returning visibility at these Class I areas back to natural conditions by the year 2064. The Class I areas within and near the Four Corners region include Mesa Verde National Park and Weminuche Wilderness Area in Colorado, Canyonlands National Park in Utah, and San Pedro Parks Wilderness Area and Bandelier National Monument in New Mexico.

Mercury and Deposition Monitoring

As part of the national Mercury Deposition Network, the State of Colorado funds and the National Park Service operates a monitor for mercury concentration and deposition at Mesa Verde National Park. Results of this monitoring are available at http://nadp.sws.uiuc.edu/mdn/. In addition to the mercury monitoring, other deposition monitoring is also ongoing at the park. Those data are also available on this web site.

Fish advisories for mercury have been issued for many water bodies (although not all fish species or sizes) in the region, including Navajo Reservoir, the San Juan River in New Mexico, and McPhee and Narraguinnep Reservoirs in Colorado.

Maps of the Four Corners Region

These maps of the region of concern for the Four Corners Air Quality Task Force is from the Memorandum of Understanding dated signed by the federal and state agencies coordinating this project.